

It's Visible!

● Pier 3 Work Now Above Water Level

Pier 3 emerged from the murky Mississippi River in October and MoDOT and contractor Traylor Brothers couldn't be happier.

"This is good news," said District Engineer Scott Meyer. "Not only will people be able to see the progress, but the most important factor is that we will also no longer be constrained by the river."

Work began Oct. 29 on the stem pour for Pier 3 of the Bill Emerson Memorial Bridge, meaning work will begin to be visible above the Mississippi River. The stem is the solid piece of the pier tower above the pier footing but below the roadway.

The stem pour is a major milestone for Pier 3 construction. Now that work will take place above water level, river stages will affect construction less. Traylor Brothers had earlier planned for the big pour on Oct. 30. River forecasts urged them to

move up the pour.

"The contractors worked extra hours to be ready for the pour on Saturday, Oct. 27 but unfortunately, the river level was

very close to where the work would begin and they didn't want to take any chances. Because everything was ready and the river stages looked good, Oct. 29 was the day," Meyer said.



Pier 3 emerged from the Mississippi in October.

The concrete pour marks the first pour on Pier 3 above water level. Work began at approximately 7:00 in the morning and consisted of more than 800 cubic yards of concrete. The pour wrapped up that afternoon.

Additional pours will follow until the pier reaches the roadway level.

For more information about construction, please see the construction update article on page 2 of *The Beacon*.



Pier 2 towers over downtown Cape . . . and all of Cape Girardeau.

Emerson Bridge Construction Update

• Everything You Need To Know To Stay Informed

Where's the busiest place in Southeast Missouri? Some would say the construction site for the new Bill Emerson Memorial Bridge.

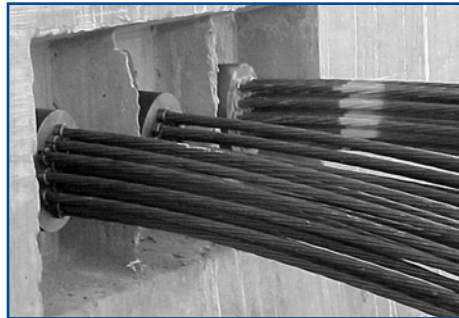
Construction is underway on three piers and there's big news for each of them. Here's where things stand now.

Pier 2 (Missouri side)--This pier is tall and keeps getting taller. How much farther can it go?

"There are about three more pours on each tower leg at Pier 2," said Senior Construction Inspector Rick Lamb. "We expect one pour happening every week or two until completed."

The first picture

below shows strands of cable on Pier 2. This cable



is actually working to make the pier stronger.

"If you pull concrete, it's weaker, but if you push concrete, it's stronger," Lamb said.

Because the bridges cables will be pulling on the piers, these strands were put through a pipe in the tower leg and then filled with grout.

"This forces the con-

crete to compress and makes it stronger," Lamb said.

Pier 3 (Mid-river)--The pier is above water level and no longer at the mercy of the Mighty Mississippi. Pier 3



will look exactly like Pier 2 when completed, so it will be climbing high into the sky.

Pier 4 (Illinois

side)--Pier 4 won't have as far to go since it will not be as tall as Piers 2 and 3, however, work is now beginning on its foundation.

The second and third photos show work ongoing to sink the caisson to the bedrock.

For more on this process, check out the article on page 3.



Minor Change In Next Contracts

Next year will bring the final two contracts for the Bill Emerson Memorial Bridge. So, why would MoDOT want to move the award of those contracts back a few months?

"We don't want to cause any conflicts between the contractors' work schedules," said Project Manager Eric Krapf. "Moving the projects back will not change the completion date for the bridge."

The first contract is for the Missouri roadway

approach extending new Route 74 to the bridge.

"Traylor Brothers needs to use that area to truck supplies in and needs the area for equipment to work on the bridge," Krapf said.

The second contract is for the Illinois deck from Pier 4 to the Illinois roadway. Even though this work takes place on the Illinois side, MoDOT awards the contracts and oversees the work. Illinois and Missouri share the price of the bridge, with MoDOT paying upfront

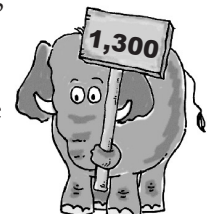
and Illinois repaying over time. Illinois has repaid all of its share of the bridge costs to date.

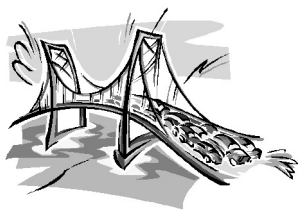
"Delaying these contracts a few months will prevent conflicts with Traylor's work on the bridge piers but won't delay the total project completion," Krapf added.

The bottom line is that rescheduling the contracts from January to June 2002 will ensure that work can continue with no conflict and the new dates will not delay the opening of the bridge.

Fun Fact For Kids:

MoDOT is using 13 million pounds of reinforcing steel to build the Emerson Bridge. That is equal to the weight of 1,300 elephants. The steel makes the bridge strong to hold all the vehicles.





The Bridge Beat

Melva Lewis was five years old when she first saw the existing Mississippi River Bridge.

"One of the highlights of my life was riding on a float as a pre-schooler

in the bridge dedication parade," Lewis said.

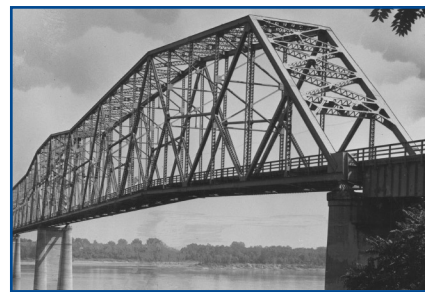
The float was from Trinity Lutheran School. Lewis said Theodore Gerlach, a carpenter who was very active with the church, built a model of the bridge the length of a flat-bed truck.

"He must have gotten

the plans because it was very exact," she said.

Mrs. Lewis was to start first grade at Trinity Lutheran the next year, but her mother switched her to the closer public school.

"I always thought it was ironic that I repre-



sented a school in the parade that I never attended," she said. "I wish I knew who the others were on the float."

In-Depth Look: Sinking A Caisson

Everyone wonders why the construction is taking so long, but few people understand the skill, talent and hard work that must go into every aspect of the bridge construction. Let's take an in-depth look at the piers' foundation and the process MoDOT and contractor Traylor Brothers go through to sink the Pier 4 caisson.

The caisson is first



constructed on dry land and then barged out to the cofferdam with a sand island work area inside. Once in the cofferdam, it is welded together.

Squares inside the caisson are filled with sand and then rings are set inside to create dredge wells, inner circles in the caisson. Next, is three different concrete pours

around the dredge wells. Then, the contractor



begins removing the sand through the dredge wells and the weight of the concrete makes the caisson begin sinking. Two more lifts of concrete are poured into the cutting edge and more sand is taken out. The caisson settles more.

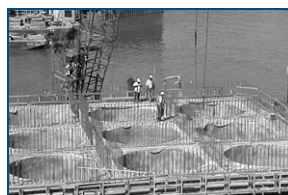
At this stage, Traylor Brothers will construct a follower cofferdam. This is



a dam inside the cofferdam but around the caisson and taller. Once it is installed, the process is continued to sink the caisson to the rock (approximately 56 feet far-

ther down).

Once the caisson is down to rock, the outside of the caisson is filled with concrete. The dredge wells



are empty by now and are cleaned out. Next, short holes are drilled into the bedrock and explosives are used to blast keyways, or cuts, into the rock beneath the dredge wells.

Divers are then sent down to inspect and clean out any material using what is basically a large vacuum.

The seal concrete pour is next. This is a large pour that will probably last two days. This pour takes place under water. It's purpose is to seal the bottom so that the water doesn't come from underneath. The seal concrete is 27-28 feet thick and also

fills the keyways, which will add stability. All the water is then pumped out of the cofferdam. At this point, we're still 50 feet below the surface of the river.

Next we clean again, then the rebar is constructed and the distribution cap is poured (this pour caps the top of the caisson).

The stem is next and



that is what will eventually come out of the water. It takes a couple of pours before the pier actually emerges from the river. Only then, is the public able to view the construction.

All this work on Pier 4 will take approximately six-to-seven months. It will likely be April before we get to the seal concrete.

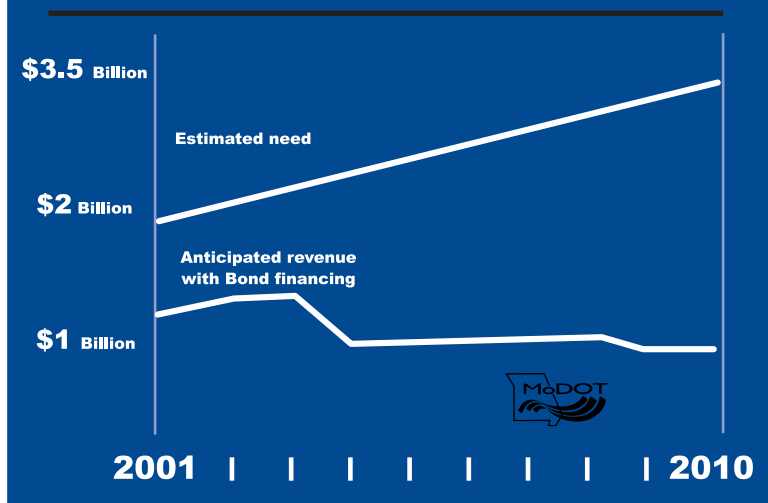
The Beacon

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The Beacon

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Needs vs. Funding



It's great when your budget is more than your expenses, unfortunately, Missouri's roads are not in that category. MoDOT's current funding is just under half of what it needs to maintain the state's roadways. Once bond financing repayments begin, funding will basically be cut in half. Without additional funding, MoDOT will only be able to do minimal maintenance on the roads with no money for new projects not already under way.

The Beacon

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